

THE DEMOLITION OF SOISSONS.

By Professor CHARLES H. MOORE, A.M. [*Hon. A.*].

OF all the losses in noble architectural monuments of the past which the world has lately sustained at the hands of the Germans that of the cathedral of Soissons is the most deplorable; for among the greater examples of early Gothic art in the Ile de France it was almost the purest, the most homogeneous, and the most intact in its main body. The fabric dates from the close of the twelfth century, as we see, among other things, in the survival of enclosing walls to the aisles, of plate tracery in the clerestory openings, and of the round column on the ground storey of the pier. But the main system shows the consistent skeleton construction that distinguishes the developed Gothic style of the Ile de France.

This cruel demolition of a great part of the fabric is a damage that cannot be made good, though the gaps may be stopped; for no modern substitute for what is gone can be the same as the original work. A restored Soissons will be a corrupt document for future generations. The greatest damage is in the nave, where the larger part of the magnificent high vaulting is wholly destroyed. That is to say, of the seven bays of it, four are entirely gone, and a large part of another, namely, the westernmost,* has been torn away. The second pier on the north side, counting from the west end, is demolished from the clerestory to the pavement, taking with it half of each of the first and second bays of the aisle vaulting and the whole triforium and clerestory on either side of it, thus leaving an open gap of two whole bays, save for the high cornice, which still bridges the void, and some fragments of the plate solids of the clerestory openings that yet hang on to the still standing half arches. Of the fourth bay, the ground storey and triforium remain intact, and the clerestory arch is also undisturbed, but the mullion and tracery are gone. The flying buttresses of the demolished pier have, of course, gone with it, but the great outer buttress from which they sprang remains standing.

Since the deed is done, and the damage is beyond repair, we can only hope that what is left may be preserved as a precious heritage from the finest school of mediæval building in its greatest age. But the catastrophe is not without compensations, for it has given us a unique opportunity to study the internal anatomy of this remarkable Gothic system.† The demolished parts are taken out in such a way as to show in what remains the whole system, both internal and external. A scientific dissection could hardly be better done; and so well are the essential principles of Gothic construction here embodied that it will be worth while to make a concise detailed analysis of one bay, or structural unit, as now revealed.

* The adjoining bay westward, though it prolongs the central aisle, does not properly belong to the nave. It is a part of the later west front.

† There are, indeed, other extant ruins of twelfth century building in the Ile de France that show much of internal structure—as the church of Longpont, near Soissons—but none of them, I believe, exhibit that consistent skeleton construction that distinguished the developed Gothic style.

Beginning with the high vaulting—since this, in the French Gothic art, determines the rest of the system—we see (Fig. 1) that of the partly ruined vault over the otherwise intact westernmost bay, the transverse rib on the nearer side is gone, while the groin ribs and three of the vault cells remain intact: that of the fourth cell, the nearer one mostly demolished, a large part remains, reaching up to the crown of the groin rib; and that of the northern cell of the nearer adjoining vault, now mostly destroyed, a large part of the north-western panel remains, so that the conoid is almost complete up to the level of the vault haunch. This conoid is worthy of attention, since its form manifests the principle that is most essential and distinctive in French Gothic vault construction, namely, the principle that an independent skeleton of ribs, and not the interpenetrations of any regular surfaces, determines the conformation of the vault.

It will be seen that the transverse rib and the groin rib on the nearer side of this conoid have fallen away at points somewhat below the haunch, but that the conoid itself remains intact quite up to the haunch, and shows, where the ribs have fallen away, the smoothly cut faces of the stones as they were shaped to the extrados of each rib. It will be noticed, too, that the springing of the transverse and groin ribs is on the level of the intrados of the lower flying buttress—seen in Fig. 1 through the gap of the demolished bays, and more fully in Fig. 2, showing the outside from the triforium level. But it will be noticed that the springing of the longitudinal rib—which in the developed Gothic system is one and the same with the archivolt of the clerestory opening—is at a much higher level, being stilted by the prolongation of the supporting shaft. It follows, of course, that this stilted keeps the vault in the straight line of the pier as far up as it extends, while the groin rib, curving forward diagonally, more and more, as it rises from its lower springing level, gradually widens the conoid in this part, so that the vault surface, from the main impost to the springing of the longitudinal rib, is oblique to the plane in which the piers are ranged, giving the conoid a triangular form in horizontal section. Thus are the vault thrusts gathered on the pier so that they can be effectively met by the flying buttresses. Above the springing of the longitudinal rib the vault surface has to follow the curve of this rib on the one side and that of the groin rib on the other; thus in shaping itself to the two it becomes twisted like a plough-share.

At the upper part of this conoid some of the stones have fallen, revealing the mass of rubble with which the pocket, formed by the two adjoining vaults, is filled, in order to weight the haunch and consolidate the whole against the force of thrusts. Above the haunch the vault is not loaded, and we see (Fig. 2) that the stones of the panels are not smoothly cut at the extrados, as they are at the intrados, and where they rest on the ribs. It is worthy of notice, too, that, while the sides are straight, the stones are seldom quite square, since they have to be shaped to form the twisted concave surface of the vault. In some of the courses the joints from rib to rib are nearly parallel, while in others they have to be variously tapered.

The aisle vaults are the same as to their masonry, but they are loaded (Fig. 2) up to their crowns, which consolidates the lower system and gives a level floor to the triforium. It is worthy of notice, too (Fig. 1), that the longitudinal ribs of the aisle vaults are stilted, though not so much so as those of the high vaults.

As before remarked, the disruption has happened in a fortunate way for the student of French Gothic construction, for it gives a perfect cross section of the entire system, save for the outer part of the aisle, which can be readily understood from what is given. It will be seen that in the nave there are no walls, except the low screen wall that encloses the triforium passage and shuts it off from the void between the aisle vaulting and the timber lean-to roof that shelters it. The piers, of great compactness and elegance, have each a shaft for each vault rib, resting on the great capital of the cylindrical ground storey column, to which column is added a small engaged shaft. The capital of the small shaft is incorporated with the great one, and the octagonal abacus common to both has two of its sides lengthened so as to cover the lesser member and provide a ledge for the vaulting shafts.

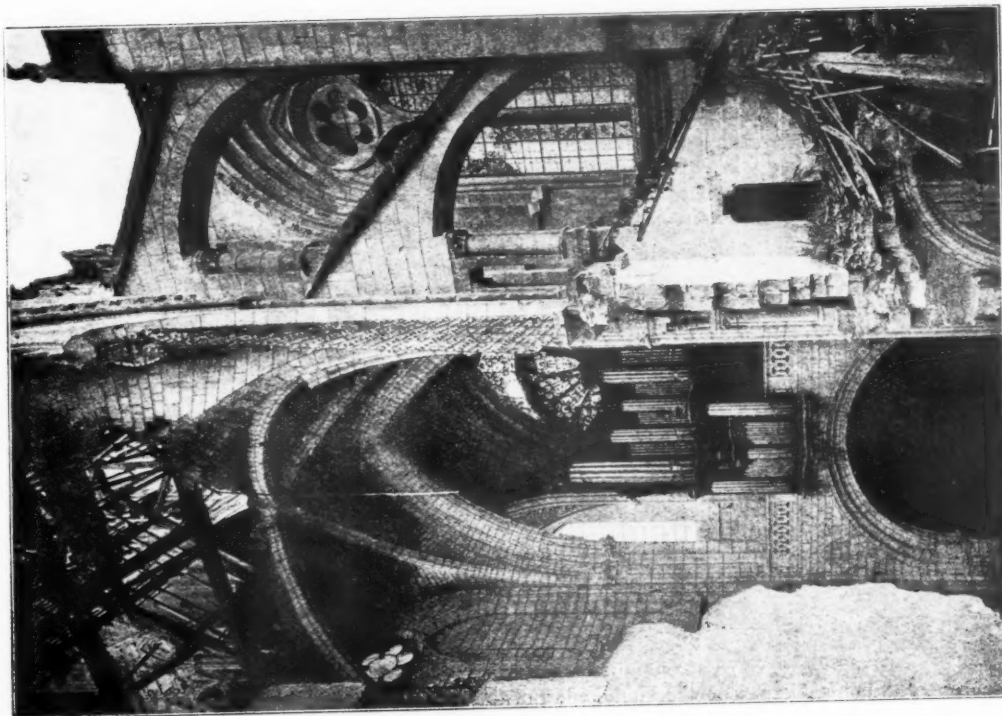


Fig. 2. Ruined Clerestory, from Roof of North Aisle.

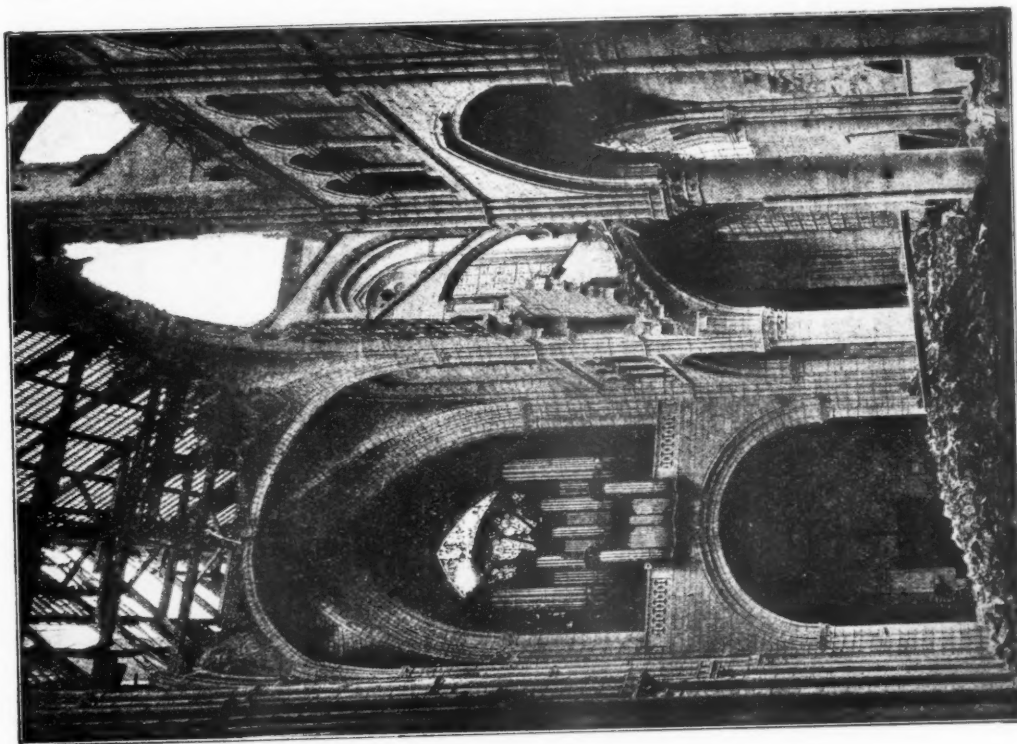


Fig. 1. View looking North-West, showing Destruction of Clerestory and Triforium of Second and Third Bays.

SOISSONS CATHEDRAL.

Though slender, these piers are abundantly strong—in appearance as in reality—to carry the weight of the vaulting, and are stiffened at mid-height in the longitudinal direction by the ground storey and triforium arcades, and transversely by the pier buttresses, which start from the haunches of the transverse ribs of the aisle vaulting and overhang the aisle, the tendency of their overhanging weight, together with the vault thrusts, to carry the piers outward being met by the flying buttresses, which here at Soissons are supplemented by a cross wall against each pier in the triforium, as will be seen in Fig. 2.

The essentially skeleton construction of the French Gothic style is most clearly shown in Fig. 3, where the complete pier and buttress system stands revealed on the east side of the great breach. The entire destruction of the vaulting over this pier shows the clerestory wall spandrels over the archivolts of the openings, which openings are veritable intercolumniations rather than windows. Below the archivolts the solids of the plate tracery and the pronounced jambs mark, indeed, some slight survival of the older building ideas, but the frank framework of pier, arch and buttress is fully developed as the sole principle of construction. In the aisles, however, we have in Soissons a considerable survival of heavy wall enclosure, and thus the openings, though large, are still windows in walls, as they are not in the clerestory.

The intact parts of the interior, seen between the first two piers on the right, afford an illustration of the ordered beauty of the early Gothic system in its finest form. The proportions of ground storey, triforium and clerestory of this nave are hardly surpassed, if they are equalled, by any other monument in the Ile de France, and the composition and details of the parts are of the purest early Gothic character, and the sparing ornament, in its vital spirit and monumental conventions, is noteworthy.

The wreck exposes to view the sound ashlar construction that distinguishes the Gothic of the Ile de France. Such skeleton construction could not, indeed, exist without it. The heavy walls and piers with cores of rubble, of the various other forms of mediæval building, find no place in the true Gothic style. In this style, as we see here, rubble occurs only in those few places where mere mass and weight are wanted, as in the pockets of the high vaulting and the levelling up over the vaulting of the aisles, already noticed. Everything else is entirely of cut stone, smoothly faced and closely jointed, save in the great outer abutments, where cores of rougher material are employed. The ruin of Soissons affords a lesson for those people who have fancied that there is inherent weakness in Gothic construction. Before the German assault the fabric stood in all appearance as securely as when newly completed seven hundred years ago.

The ruin affords some instructive illustration of the possible tenacity of masonry after more or less loss of supports. We see in Figs. 1 and 4 that over the void left by the two demolished bays the clerestory cornice and one course of stones under it remain quite intact bridging the interval. The two remaining half arches, one on either side, appear to lock it; but one would not have supposed there could be binding force enough to hold these horizontal courses thus suspended even for a short time. Still more remarkable is the tenacity of the large portion of vault shell that we see (Fig. 1) reaching up to the crown of the groin rib in the westernmost bay that we have examined. There is nothing but the mortar in the joints to hold them, for they are not now locked in any way. Then look (Fig. 1) at the large fragment of the triforium screen-wall that overhangs the demolished aisle vault. The weight of this is great, its foundation is entirely gone, and there is a fissure extending from the top almost to the bottom, where it begins to overhang; yet there it remains reaching out over that void. In Fig. 2 we see on the left a part of the same wall on the opposite side of the breach.

The number of French monuments of the Middle Ages now destroyed or irreparably damaged by the Germans is great, and includes some of the most important examples of the early and early mature Gothic style. Of those on the firing line, Soissons and Reims are the most important, and have suffered most. Laon, being within the German lines, is, I believe, still intact; but what may

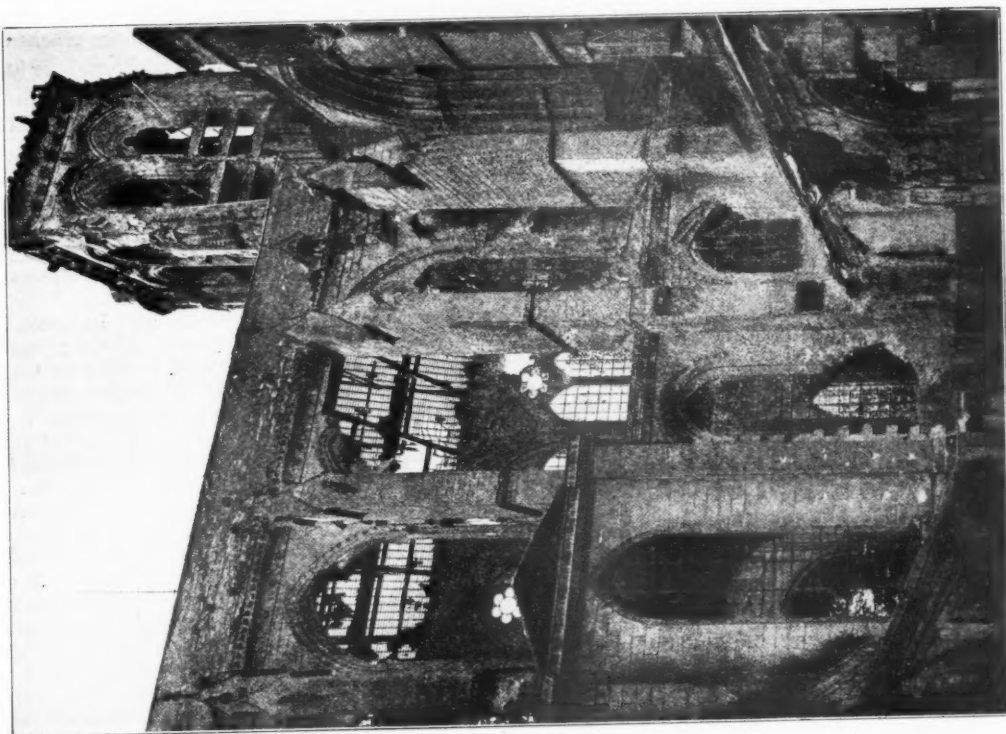


Fig. 4. View looking South-West, showing how Tower was used as the Target.

SOISSONS CATHEDRAL.

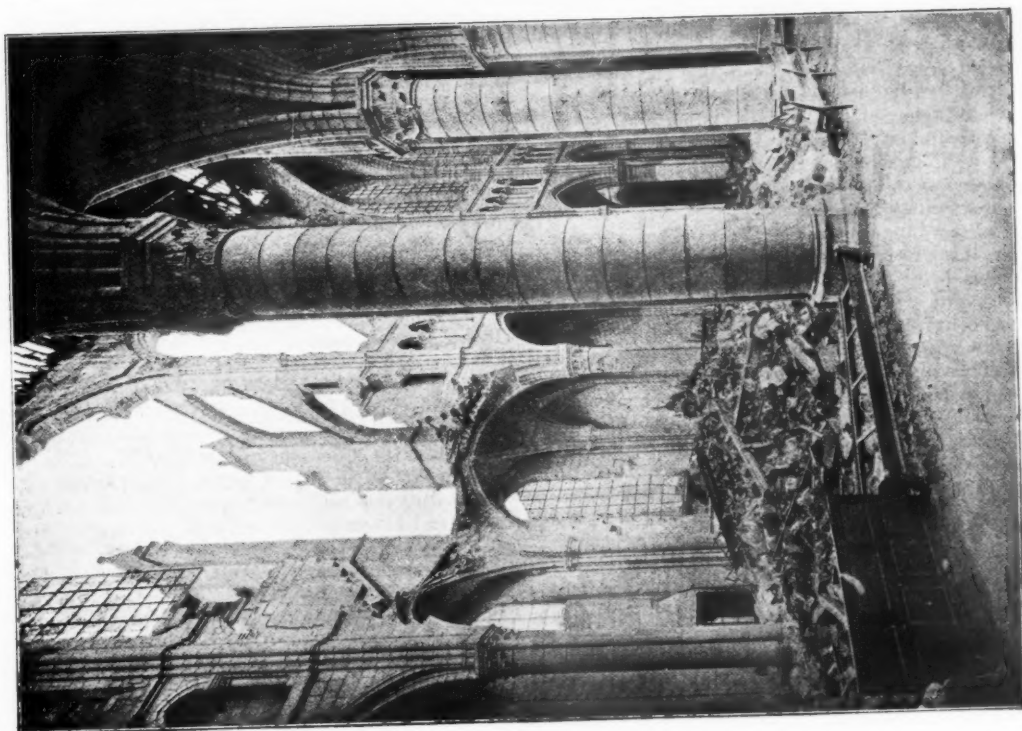


Fig. 3. Ruined Bays, from the South Aisle.

yet happen to it no one can tell.* Fortunately the Vandals have been held within the lines reached in their first onrush more than four years ago, and have even been driven back from positions held at first, which gave command of Noyon and Senlis, the two most important cathedral churches of the nascent Gothic, and from Amiens, the crowning glory of the developed style. Happily these great monuments remain practically uninjured, save that Noyon has been badly damaged in some of its external parts.

REVIEWS.

THE HOUSING PROBLEM IN AMERICA.

The Housing Problem in War and Peace. Essays reprinted from the Journal of the American Institute of Architects. Ato. Washington, 1918. [The Octagon, Washington, D.C.]

A community cannot readily produce a satisfactory solution of a great social problem unless its efforts are backed by well-informed public opinion, and in publishing *The Housing Problem in War and Peace* the American Institute of Architects has surely done an admirable piece of work, which will be of great service to the American people. The book—which is, in the main, the work of four writers—consists of a number of essays which had previously appeared in the *Journal of the American Institute*, and the lofty standard which is maintained throughout induces the hope that the reprint will be read with keen interest by a very large public.

The first part of *The Housing Problem*, by Mr. C. H. Whitaker, Editor of the *Journal of the American Institute*, forms an excellent introduction. Mr. Whitaker is an enthusiast, he knows his subject, and he presents his case ably. He shows how the war taught America, as it had already taught England, that the people are the greatest national asset, and that the Housing Problem, being of fundamental importance to the whole community, cannot with wisdom be left for chance to find a solution. He asks the question, "What is a house?" and the answer he submits is the answer of a broad-minded student of life.

A solitary quotation rarely does justice to an essay, but in this case it is difficult to resist. "Socialism," says somebody. "Fad," says another. "Paternalism," cries a third. But, mark this well, the least important thing about it is the name by which it is called. Those who live principally for the pleasure of hugging words to their bosom long after all spark of life has left the letters which they spell glibly over and over, may continue the pursuit of this childish pastime. Men who have sense enough to recognise human forces and currents—who know that the world is moved by these and that progress comes through them and not by the names they are called—such men will understand that England is putting her house in order by putting the houses of her people in order."

The second part, by a New York architect, Mr. F. L. Ackerman, is to some extent the result of a visit to

England in 1917. It is a scholarly attempt to explain the similarities of, and the differences between, the English and the American housing problems. Mr. Ackerman has seen far below the surface, and demonstrates that the progress we have made in housing and town-planning has been profoundly affected by our social and political development and by our architectural tradition. In the best work of our town-planners, architects, and engineers he sees—what is surely to be observed in the good work of all ages—the crystallising of the general tendencies of the day into "material expressions of permanence." He gives an excellent summary of our pre-war housing legislation and methods, and some interesting comments on our special housing activities during the first three years of the war, drawing particular attention to the fact that some of our war-time housing schemes form complete communities, with dining-halls, clubs, institutes, schools, churches, hospitals, stores and markets. He also deals with the effort which is being made to ensure that after the war our housing problem will be tackled in a comprehensive and far-seeing spirit. Mr. Ackerman's essay—which concludes with a statement of the American problem—should alone secure for the book a wide circulation in our own country as well as in the United States.

Mr. R. S. Childs, Secretary of the Committee on Industrial Towns, New York City, contributes a telling chapter on the financial aspect of the problem. By means of a number of interesting examples he shows how the development of American towns on the old lines has brought riches to the few at the expense of the community. "The net unearned increment which Lackawanna has given as a princely gift to miscellaneous lucky private landowners and speculators is \$6,788,000, a figure large enough in itself to explain why Lackawanna is mostly ragged and squalid instead of dainty and wholesome."

Mr. Childs devotes part of his chapter to the important question of the employer as landlord, and concludes by urging that housing operations should be in the hands of the community as a whole.

Edith Wood, an expert in Housing Legislation, writes a valuable article on her special subject. Mr. Ackerman had touched on the question of constructive versus restrictive housing legislation; Miss Wood gives a very able summary of the constructive housing laws of England and the British Colonies, Belgium ("The Belgians have the honour of having produced the

* At the moment of going to press the news arrives that the French army has regained possession of Laon.—ED.

earliest effective national constructive housing law—and up to the present time one of the best”), Germany (“Clearly there is no other country which has gone into housing on so large a scale or in so systematic a way”), France (“Municipal housing has been undertaken only for the benefit of large families”), Italy, and a number of other countries. Applying the results of this foreign experience, Miss Wood proceeds to outline a housing policy for the United States. She points out, in conclusion, that the American public school system costs something over half a billion dollars a year, and is well worth it, but pertinently asks, “If a community has not the energy and resourcefulness to do both, should it not make sure that its children are properly housed before it troubles about their book-learning?”

Possibly, however, the most striking part of Miss Wood's contribution is that which deals with the “dark rooms” of New York. In 1900 there were 350,000 of these in Greater New York; now, thanks to restrictive legislation, there is none, *because windows have been cut into the adjoining rooms!*

A large number of excellent illustrations from photographs and drawings, together with brief descriptions, are given of our housing schemes at Well Hall, Gretna, and other places; Walter Kilham contributes an illustrated article on “Housing by the Commonwealth of Massachusetts”; a translation (with illustrations) is given of Henri Lavedan's article on “Small-House Reconstruction in France”; and the appendix includes a note on the New York City Tenement House Law, and a useful contribution by Thomas Adams, Town-Planning Advisor, Commission of Conservation of Canada, on “The Need of Town-Planning Legislation and Procedure for Control of Land.”

Several of the writers speak in terms of high appreciation of the housing work which has been done in England. We on this side realise that it is only a beginning; we are going to do far more, and we are going to do it far better. We realise that we have made mistakes in our small schemes and hope to avoid them when we start the big one.

As in war-work, so in housing, America may learn from our errors and from our successes, but America will solve her own problem.

W. S. PURCHON, M.A. [A.].

Books Received.

- The English Home, from Charles I. to George IV.: Its Architecture, Decoration and Garden Design. By J. Alfred Gotch, F.S.A., author of “Architecture of the Renaissance in England,” “Early Renaissance Architecture in England,” “The Growth of the English House,” etc. With upwards of 300 illustrations. 8s. Lond. 1918 [B. T. Batsford, 94 High Holborn.]
- The Housing Problem in War and Peace. Papers by Charles Harris Whitaker, Editor of the “Journal of the American Institute of Architects”; Frederick L. Ackerman, Architect (New York); Richard S. Childs, Secretary of the Committee on Industrial Towns, New York City; Edith Elmer Wood, Expert in Housing Legislation, Philadelphia. 4s. 1918. [The Octagon, Washington, D.C.]
- Reinforced Concrete: Theory and Practice. By Frederick Rings, M.S.A. Second Revised and Enlarged Edition. 8s. Lond. 1918. 10s. 6d. net. [B. T. Batsford, Ltd., 94 High Holborn.]
- Australian Town Planning Conference and Exhibition: Official Volume of Proceedings of the First Australian Town Planning and Housing Conference and Exhibition, Adelaide, 17th to 24th October 1917. 4s. Adelaide 1918. [Vardon & Son, Ltd., Adelaide.]



9 CONDUIT STREET, LONDON, W., 19th Oct. 1918.

CHRONICLE.

The R.I.B.A. Record of Honour: Fifty-sixth List.

Fallen in the War.

- GORRINGE, WILFRED STUART [Associate, 1911]. Killed in action last June.
- HOOKEY, Private GILBERT JOHN FRANK, Cambridgeshire Regiment [Licentiate]. Killed in action in France.
- SAMSON, 2nd Lieut. OSWALD MASSEY, R.G.A. Died of wounds. (Son of Mr. C. H. Samson [F.], and formerly Assistant Master at Rugby.)
- TOONE, Captain JOHN ALGERNON EDMUND, O.C. 3rd Australian Div. Pioneers [Associate, 1915]. Killed in action.

Captain Toone, who served his articles with Mr. J. Lindsay Grant, of the School of Architecture, Manchester University, had held a position under the Commonwealth Government, Melbourne, and had been engaged in designing and planning for the new Australian capital. He saw much service at Ypres, Messines, Armentières, and recently at Neuville. He was leading his men on the morning of 6th September when he was picked off by a sniper and died immediately.

Military Honours.

- KEYS, Capt. P. H., R.E. [Associate]. Promoted to Acting Major, and awarded Bar to the Military Cross for gallantry.

“While engaged on the construction of a defence line the Company came under very heavy shell fire, two officers being badly wounded, and the firing parties suffering many casualties. This officer kept his men at work without a break for two days, and it was largely due to his energy and disregard of danger that this unit put up such a remarkably fine performance in so rapidly and successfully getting the wire up.”—*London Gazette*, 16th September.

- GRANT, Lieut. T. F. W., R.E. [Associate]. Awarded the Military Cross.

Lieut. Grant, a former pupil of Mr. F. W. Troup's, joined the Royal Engineers as a sapper soon after war broke out, and was subsequently granted a commission. He is now serving with the British Salonica Force.

Promotions.

Mr. H. M. Spence [A.] has been gazetted 2nd Lieut. R.E. Captain R. Kitching Ellison, R.A.M.C., Sanitary Section, whose promotion was recorded in the last issue of the JOURNAL [p. 251], is an Associate of the Institute, not a Licentiate as stated in error.

Demobilisation : Deputation to the Ministry of Labour.

A deputation of architects and surveyors waited upon the Minister of Labour at Montagu House, Whitehall, on Tuesday, the 8th inst., to lay before him certain proposals respecting the order in which men should be released from the Services as soon as peace is declared. The deputation consisted of the following members :—Mr. Henry T. Hare, representing the R.I.B.A.; Mr. F. H. A. Hardcastle, representing the Surveyors' Institution; Mr. Percy B. Tubbs, representing the Society of Architects; Mr. T. W. A. Hayward, representing the Institution of Municipal and County Engineers; Mr. Walter Lawrence, representing the Quantity Surveyors' Association.

The deputation were received by Mr. W. C. Bridgeman, M.P., Parliamentary Secretary to the Minister of Labour.

Mr. Hare opened the discussion by stating that a conference of representatives of the professional institutions of Architects, Surveyors and Builders had recently been held at the R.I.B.A., and that amongst the matters discussed was the question of the order of demobilisation on the conclusion of peace. The points the deputation wished to put before the Minister, he said, were briefly set out in a Memorandum which had been drawn up and subscribed to by the various bodies represented at the Conference. The Memorandum was as follows :—

It is of admitted importance that upon demobilisation, men and women returning to civil life from the Army and Navy and munitions work should find as immediate an opportunity as possible of employment. To facilitate this object it is suggested that upon the declaration of peace employers should be encouraged to make application for the release (in advance of general demobilisation) of men and women of the directing class who act in the capacity of managers and organisers of the professional, commercial and industrial concerns with which they were connected before the war and who could get the various offices, organisations and branches thereof reorganised and in an efficient condition to deal with the businesses they are engaged in so as to enable them promptly to meet peace conditions.

Most businesses are at present suffering greatly through the loss of persons of this class, and are in consequence crippled and disorganised so far as restarting their ordinary pre-war business is concerned. More especially is this the case with businesses which have been diverted from their special pre-war work to munitions.

This Conference, therefore, recommends that a circular letter of advice should be issued by the competent authorities dealing with demobilisation at the Admiralty, War Office, and Ministry of Munitions, to all Employers, Professional Institutions, and Associations, inviting them to apply on demobilisation for the immediate release of individuals in these categories, specifying them by name and stating their qualifications.

The Conference considers that all professional men come under one or other of these designations, but for the present purposes reference is particularly made to members of those institutions and societies which it represents.

Mr. Hare went on to say that the staffs of all their offices had been seriously depleted by the war, and were indeed in some cases altogether non-existent. If the building industry was to be reconstituted rapidly, it was essential that the staffs of architects and surveyors should be replaced at the earliest possible moment, as their work was precedent to any extensive resumption of actual building operations. It was evident that the only means of getting back quickly the men required was for the employer in each case to be invited to give the names and qualifications of the assistants most immediately wanted. There would be no danger of an employer asking for more men than he really required, as he would not wish to be at the expense of needless salaries.

Mr. Hayward, Mr. Tubbs and the other members also spoke in support of the proposal.

Mr. Bridgeman stated that the proposal appeared to be a reasonable one, and it would be carefully considered by the authorities concerned. He inquired whether, if the suggestion were acceded to, the R.I.B.A. and the other bodies would be prepared to set up a tribunal to examine and report upon such applications as might be received.

Assurances were given that the various bodies represented could be counted upon to give the authorities all the assistance in their power. The deputation then withdrew.

The Military Service Acts : R.I.B.A. Board of Inquiry.

The Council having had brought to their notice instances of hardship to architects caused through the want of knowledge of architectural practice shown by the tribunals, applied some months ago for Government recognition of a Board of Inquiry set up by the Council to act in an advisory capacity in the matter of appeals for exemption by architects liable to be called up under the Military Service Acts. The application was favourably considered, and the Council recently received a letter from the Ministry of National Service stating that the advice of the Board would be of assistance in cases of appeals which presented special difficulties, and that the Regional Directors of National Service would be glad to give full consideration to any case which the Board desired to bring to their notice. The Board, which consists of ten members, with the Presidents of the Allied Societies as *ex officio* members, has held several sittings and dealt with applications brought before them. Architects desirous of having their cases considered are required to furnish the Board with full particulars of the grounds of their appeal, and all communications must be in writing addressed to "The Hon. Secretary, R.I.B.A. Board of Inquiry," 9 Conduit Street, W.

Premiated Cottage Designs.

The Institute has in the Press and will shortly publish in book form, demy quarto, reproductions of the cottage designs awarded premiums in the competitions recently held by the Institute with the

concurrence of the Local Government Board. The plans will be accompanied by perspectives, from drawings by Messrs. T. Raffles Davison, H. S. East, Geoffrey Lucas, C. Wontner Smith, and Captain Cyril Farey. The letterpress, contributed by a sub-committee of the Committee of Selection, is to include particulars of the competition, general observations and notes on the designs submitted, and recommendations to local authorities and others contemplating Town Planning schemes. Copies will be obtainable from the Institute, price 5s. a copy, postage extra.

Mr. Hayes Fisher on the Housing Question.

An important Conference on the Housing Question, arranged by the Devon County Council, was held at Exeter on the 25th September, Sir Henry Lopes, Chairman of the Council, presiding. The assembly included Mr. Hayes Fisher, President of the Local Government Board, Sir Noel Kershaw, Secretary of the Local Government Board, the Lord Lieutenant of the County (Earl Fortescue), the Earl of Portsmouth, the Mayor of Exeter, representatives of the County Councils of Cornwall, Devon, Dorset and Somerset, and of local authorities in those counties; Mr. Lewis F. Tonar [*Licentiate*], President of the Devon and Exeter Society, and Mr. James Crocker [*F.*], Past President.

Among the questions put to Mr. Fisher was one by a Falmouth Labour representative, who asked whether they would be allowed to start a building scheme before the end of the war, and a Honiton representative suggested that local timber for building purposes might be prepared in anticipation of building schemes.

Mr. Hayes Fisher said the sooner that we got back to building houses on an economic basis the better it would be, but no one had yet told him that the private builder was likely to come on to the scene again after the war with any chance of getting an economic rent and making a profit for himself. And as houses were urgently needed, the Government must be prepared with a programme to put into force directly peace was in sight. He could give no hope of putting any scheme into operation earlier than this, because the men were wanted for munitions, etc., and the Government also wanted all materials, while loans could not be sanctioned. As to how the rate should be applied, he claimed that housing was a valuable asset to most local authorities, and the town that could have plenty of good houses for the workers would attract the working man. He wanted to be fair all round, and he did not think anyone would grudge a small rate even if he had been more fortunate than his fellow and had been able to secure a house for himself. They all, in some form or other, had to contribute to something they did not participate in. Touching another question put to him, Mr. Fisher said he did not think there was any need for alarm as to a 9d. rate, and as to the 25 per cent. of the deficit paid by the local authority, so long as this was enforced they could be sure that there would be no robbery and no jobbery anywhere. He wanted fair dues between everybody. As to the rents obtainable, they would have to apply their local knowledge and consider the local circumstances. It had been said they were only providing for the better class of workman, but he thought the effect would be that these would move into the new and larger houses, and then the smaller ones vacated would, after

renovation, be occupied in many instances by the present tenement occupiers. The Government plan was for a house with a parlour, kitchen, scullery, bathroom and three bedrooms, but here again local needs must be consulted. There was difficulty as to materials, but the whole position was being surveyed, and his hope was that the Government would give priority to a large extent to materials for building working men's dwellings. He advised local authorities to keep in touch with the Local Government Board on this subject. The proposal was that there should be not more than eight of these model dwellings to the acre in the rural districts, and not more than twelve in the urban areas, but plans might be passed if there were even more than this number, if necessity called for it.

Addressing a mass meeting held the same evening at the Victoria Hall, Exeter, Mr. Hayes Fisher said that we were short of houses everywhere. Some people put it, as he did, at 300,000. That was the figure that had been agreed on with the Minister of Reconstruction. He had made inquiries of all local authorities, and they told him they were willing to build 240,000 houses, and to begin building them as soon as peace was declared. They could not build without skilled labour and materials, and there would be a shortage of both after the war, and there was other work to be done. Working men's dwellings would have priority. How was the work to be done? He believed that we might be able to use some of the munition factories that were now turning out weapons of destruction, and turn them on to making these articles of reconstruction, and by standardisation we might be able to get them quicker and cheaper. The question also arose as to who were going to build the houses. Up to the present time 95 out of every hundred houses built for the working class had been built by private speculative builders. But after the war the private builder would no longer come on the ground. There would be no profit in it. It would probably cost twice as much to build a house as it did before the war, owing to the price of money for borrowing and the price of materials and labour, and the working man would not be able to pay a rent which would bring back the money expended and return a profit. They must estimate that for a few years after the war they would have to build houses at a very considerable loss—that is to say, the rent would not pay the interest on the borrowed money and the instalments on the loan for the 60 years or so during which it would run. How were they going to meet the situation? He had had experience of Government Departments' building. They were very good builders, very sound builders, but they were ruinously expensive. Apart from that, how could a Government Department in London know what houses were wanted in some of the outlying districts in the West of England? The Government had therefore hit on the only plan, and that was a partnership between the Government and local authorities. The Government asked the local authorities to examine their neighbourhood, see what was going to happen with regard to labour in the district, see what sort of houses they were likely to require within the next few years, and search for a site.

Mr. Fisher went on to advise local authorities to ascertain the houses they wanted, select the sites, call in the architect, and make their plans. The general plans had been issued in the instructions of the Local Government Board. They aimed at a better standard of house, to contain a living room with a sunny aspect, a parlour, three bedrooms,

a scullery, a bathroom, and so on. He urged local authorities to take into counsel some practical working women in their districts to suggest the best place for the fittings. Six million women were being enfranchised, and they were going to have something to say as to the domestic policy of this country, and he hoped and believed they were going to take an interest in this housing question, which was part of the great health question. Dealing with the cost of the housing scheme and the Government's offer, Mr. Fisher said he knew of only one large town in the West of England where the ratepayers were likely to have to incur more than a penny rate. How that town would be dealt with he was not at present in a position to say. But they might take it from him that in the West of England they could get the number of new houses they required built for them, and they would not incur more than a penny rate.

"Cob Houses."

Mr. T. C. Bridges, writing on "Cob Houses" in the *Daily Mail* recently, says:—

You may make bricks without straw, but you cannot make "cob" out of plain clay.

All over North Devon and down around Exeter as well, cob walls, cob cottages, and cob outbuildings are everywhere to be seen. Very picturesque they are, too, especially when white or pink washed.

"Cob" is clay mixed with straw, and built up just like modern concrete. A bottomless trough is used, made of two parallel planks. The clay, mixed with chopped straw, is pressed into it, and each course is allowed to dry before the next is put on. The result is a wall of great thickness, considerable strength, and of such durability that cob houses are still inhabited which were built five or six hundred years ago.

A cob house well thatched is warmer in winter and cooler in summer than any brick or stone building, and there are no such walls for ripening wall fruit as those constructed in this simple fashion.

Nor is "cob" confined to Devonshire. There are cob walls in Somerset, in Northamptonshire, and probably in other parts of the country as well; while in Mexico, Texas, Arizona, and in Southern California many of the great ranch houses are "cob" all through, only they call it "adobe."

Up to about 1820 "cob" was the usual building material for country cottages in Devonshire, and accounts of that date show that the price was only 3s. 6d. per perch, as against 5s. to 6s. for rough stone work.

The trouble is that the industry has completely died out. An old man of 76 told me that the last time he saw a "cob" wall built was sixty years ago. At a recent meeting of the Devon Education Committee Lord Portsmouth suggested a grant towards the establishment of a class in "cob" making.

In view of the crying need for new cottages in the near future, I think that in "cob" may be found a cheap and satisfactory substitute for brick or stone. "Cob" is far drier than most of the stone used.

Certainly it is the most picturesque of building

materials, and if it will deliver us from the horrors of concrete cottages by all means let us try to resuscitate this almost forgotten method of building.

Victoria and Albert Museum: Exhibition of Rubbings of Monumental Brasses.

In view of the suitability of monumental brasses as one means of meeting the extensive demands for memorials which have arisen out of the war, a selection of rubbings of well-known English brasses from the Museum Collections has been arranged in Room 135 (top floor) of the Victoria and Albert Museum. The rubbings have been classified under the headings, Military, Ecclesiastical, Civil and other Costume, and illustrate the development of this form of memorial in England from the thirteenth century onwards. A few from modern brasses are also shown, including examples from a series now in process of erection upon an "Eleanor" cross at Sledmere, Yorks, in memory of officers and men from that village who have fallen during the war. It is hoped that this exhibition may give an impetus towards reviving the use of a form of memorial which is at once distinctively English in character and admirably suited for the purpose in view. The Museum Collections contain rubbings of over 2,400 brasses. Any which are not on exhibition can be seen on application at the Students' Room of the Department of Engraving, Illustration and Design (Room 132). A complete list with illustrations of 176 rubbings on 56 plates is published, price 2s. 6d.

Useful and Interesting War Work.

Sir Alfred T. Davies, K.B.E., C.B., Chairman and Hon. Director of the "British Prisoners of War Book Scheme (Educational)," writes:—

"The interest which your Institute has taken in the work of my committee prompts me to acquaint you with the fact that owing in large part no doubt to the fighting on the Western Front in March last, which led to the capture by the Germans of great numbers of additional British and Colonial prisoners, the requests for books to us have of late enormously increased. We hope to be equal to all demands, but we are greatly in need of more voluntary workers.

"Our work appeals—more, perhaps, than that of most other war charities—to educated men and women. If, therefore, any members of your Society can do anything to bring our needs to the notice of any friends who may have some spare time which they would like to devote to interesting and useful war work, my committee would be very grateful. We require regular whole-time or part-time workers to help in the various departments of selecting, censoring, sorting or packing books, and in filing, registration, correspondence and other secretarial work.

"I will gladly forward information about the work to any inquirers; or, if they can call here (Victoria and Albert Museum, S. Kensington), we shall be very pleased to let them see something of our organisation."

NOTICES.

Election of Members, 2nd December.

Applications for election have been received from the undermentioned gentlemen. Notice of any objection or other communication respecting them must be sent to the Secretary R.I.B.A., for submission to the Council prior to Monday, 4th November.

AS ASSOCIATES (64).

ADAMS: WILLIAM NASEBY [S., 1908], c/o Messrs. Campbell & Adams, 51 North John Street, Liverpool.

Proposers: C. H. Reilly, Philip Thicknesse, Arnold Thornely.

BAGENAL: HOPE [S., 1913], 6 Queen Square, Bloomsbury, W.C.1, and Leaside, Hertingfordbury, Hertfordshire.

Proposers: Herbert Wigglesworth, D. Barclay Niven, A. Dunbar Smith.

BARROWCLIFF: ARNOLD MONTAGUE [S., 1913], Forest Road, Loughborough, Leicestershire.

Proposers: S. Perkins Pick, Howard H. Thomson, William M. Cowdell.

BLYTH: CHARLES KYDD [S., 1912], 110a Northview Road, Hornsey, N.S.

Proposers: W. Gillbee Scott, S. Keynes Purchase, J. R. Moore-Smith.

BOWER: ALBERT EGERTON LANCE [S., 1905], Messrs. Shephard & Bower, Royal Liver Building, Liverpool.

Proposers: Arnold Thornely, Hastwell Grayson, E. Percy Hinde.

BRADSHAW: HAROLD CHALTON [S., 1913], Hillside, Heathfield Road, Wavertree, Liverpool.

Proposers: C. H. Reilly, Hastwell Grayson, Frank G. Briggs.

BROAD: MALCOLM CHARLES [S., 1912], No. 1 (Res.) Battalion, M.G.C., Belton Park, Grantham.

Proposers: R. Frank Atkinson, Horace Cheston, Arthur C. Blomfield.

CHAIKIN: BENJAMIN [S., 1907], 47 White Lion Street, Norton Folgate, N.

Proposers: M. E. Collins, E. Jeaffreson Jackson and the Council.

CORKILL: LAURENCE LAVERY [S., 1908], Riverside, Ramsey, Isle of Man.

Proposed by the Council.

DANIEL: THOMAS LLEWELYN [S., 1915], 204 Cranbrook Road, Ilford, Essex.

Proposers: A. E. Richardson and the Council.

DARTNALL: JAMES AMBROSE [S., 1914], Forest House, High Stone, Leytonstone, E.

Proposed by the Council.

DAVIS: SYDNEY WILLIAM [Special], War Office, 4 Millbank, S.W.1.

Proposers: E. Vincent Harris and the Council.

DICKSEE: HAROLD JOHN HUGH [S., 1913], Brendon Lodge, Lyndale, Child's Hill, N.W.2.

Proposers: E. Guy Dawber, Robert Atkinson, Bernard Dicksee.

DUCKWORTH: ALFRED [S., 1913], "Moleside," Rossall Beach, near Fleetwood.

Proposed by the Council.

EVANS: THOMAS CWMANNE [S., 1912], "Longfield," Worcester Park, Surrey.

Proposers: Robert Atkinson, Charles E. Varndell, William Steward.

FABRY: CYRIL ARTHUR [S., 1909], "Thornfield," Wildwood Rise, Hampstead Heath, N.W.4.

Proposers: Ernest Newton, A.R.A., Horace Field, F. Winton Newman.

FILKINS: EDWIN WILLIAM [S., 1913], The Bungalow, Claphall, Gravesend.

Proposers: Professor Beresford Pite, M. Wheeler, E. Guy Dawber.

FINCHAM: EDWARD [S., 1910], The Green, Mark's Tey, Colchester.

Proposers: A. Ernest Heazell, Albert N. Bromley, Ernest R. Sutton.

GARRETT: SIDNEY COLSTON [S., 1911], 34 Ship Street, Brighton, and 40 Norton Road, Hove.

Proposers: George Hubbard, E. Guy Dawber, Alfred W. S. Cross.

GASK: JOHN HAROLD [S., 1904], Longfield House, Lindsay Road, Branksome Park, Bournemouth.

Proposers: Joseph Pilling, Josiah Gunton, Francis Jones.

GRANT: JAMES LINDSAY [Special], Church Villa, Northenden, Cheshire.

Proposers: Paul Ogden, Percy S. Worthington, Isaac Taylor.

GRAY: ANDREW [S., 1915], 64 Duncombe Road, Hertford.

Proposers: A. R. Jemmett, Percy B. Tubbs, H. V. Lanchester.

HARRISON: HARRY ST. JOHN [S., 1914], 102 Holly Avenue, Jesmond, Newcastle-on-Tyne.

Proposers: Beresford Pite, Robert Atkinson, R. Burns Dick.

HAYS: JOHN WILSON [S. 1905], "The Homestead," Wingate, Co. Durham.

Proposers: F. Willey, Arthur B. Plummer, Charles S. Errington.

HEALEY: FRANCIS HURST [S., 1905], 42 Tyrrel Street, Bradford, Yorks, and 2 Cross Banks, Shipley, Yorks.

Proposers: J. Wreghitt Cannon, W. H. Thorp, H. S. Chorley.

HENDRY: MORRISON [S., 1913], 3 Pitstruan Place, Aberdeen.

Proposers: George Watt, J. A. O. Allan, J. Ross McMillan.

HOLDEN: WILLIAM [S., 1910], Glenholme, Grange-over-Sands, Lancashire.

Proposers: H. Percy Adams and the Council.

HORSBURGH: ARTHUR LINDSAY [S., 1912], Alma Barracks, Blackdown, Farnborough.

Proposers: Harry Redfern, H. Favarger, R. Douglas Wells.

HOWCROFT: GILBERT BURDETT [S., 1913], Uppermill, near Oldham.

Proposers: Beresford Pite and the Council.

HUDSON: PHILIP SIDNEY [S., 1917], The Royal Hospital, Chelsea, S.W.3.

Proposers: C. H. B. Quennell, A. Heron Ryan-Tenison, H. P. Burke Downing.

HUTTON: ARTHUR JAMES SCOTT [S., 1918], H.M. Office of Works, Parliament Square, Edinburgh.

Proposers: John Keppie, John Watson, David B. Hutton.

JAMES: CHARLES HOLLOWAY [S., 1912], 46 Westbourne Terrace, Hyde Park, W.2.

Proposers: Sir Edwin Lutyens, A.R.A., Raymond Unwin, T. Edwin Cooper.

KEY: WILLIAM DONALD [S., 1914], "Glen Caladh," Upminster, Essex.

Proposers: William Stewart, A. Jessop Hardwick, John A. Gill-Knight.

KNIGHT: SHIRLEY [S., 1913], 15 Dene Mansions, West Hampstead, N.W.6.

Proposed by the Council.

LAVENDER: ERNEST CLIFFORD [S., 1913], "Hughenden," Belvedere Road, Walsall.

Proposers: F. E. F. Bailey and the Council.

LIDBETTER: HUBERT [S., 1905], Waterloo House, Cocker-mouth, Cumberland.

Proposers: Henry V. Ashley, F. Winton Newman, Fred. Rowntree.

LISTER: HAROLD ALFRED [S., 1912], 8 Wyle Cop, Shrewsbury.

Proposers: W. Scott-Deakin and the Council.

- LONE: REGINALD WILCOX [S., 1911], Turn Lee, Woodford Green, Essex.
Proposers: Arthur Keen, Ernest Newton, A.R.A., E. Guy Dawber.
- MACGREGOR: JOHN ERIC MIERS [S., 1918], Spring Cottage, Hanwell, W.7.
Proposers: Fred. Rowntree, Hugh P. G. Maule, Charles Spooner.
- McLACHLAN: CHARLES [S., 1910], 23 Clarendon Road, Lewisham, S.E.13.
Proposers: W. E. Riley, Sir Ernest George, A.R.A., H. D. Searles-Wood.
- McLEAN: GEORGE [S., 1911], Gwyule, Portmadoc, North Wales.
Proposers: W. H. Harrison, Melville S. Ward, E. Turner Powell.
- MADDOX: FRANK MORRALL [Special], 8 Havelock Place, Shelton, Stoke-on-Trent.
Proposers: Percy B. Tubbs, E. A. Rickards, James A. Swan.
- MULLINS: GEOFFREY THOMAS [S., 1914], A.P.O., S. 38, B.E.F., France.
Proposers: Professor F. M. Simpson, Henry T. Hare and the Council.
- NAPIER: JAMES [S., 1915], Dykehead, Port of Menteith, Perthshire.
Proposers: John Fairweather, John Watson, Sir John J. Burnet, L.L.D., R.S.A.
- PARKIN: WILLIAM GORDON [S., 1913], 51 Crown Street, Jeppestown, Johannesburg, South Africa.
Proposed by the Council.
- PARNACOTT: HORACE WALTER [S., 1906], 15 Laurel Grove, Anerley, S.E.20.
Proposers: A. E. Richardson, C. Lovett Gill, S. D. Adshead.
- PHILP: ARTHUR THOMAS [S., 1915], Anderton, Boscastle, Cornwall.
Proposers: Henry A. Saul, Raymond Unwin, S. B. Russell.
- PLATTS: PERCY OATES [S., 1908], County Hall, Wakefield, and Fern Villa, Cardigan Terrace, Wakefield.
Proposers: T. Edward Marshall, Jno. Stuart, John Wreghitt Cannon.
- PRESTWICH: ERNEST M.A. [S. 1912], "Everdene," Hand Lane, Leigh, Lancs.
Proposers: Professor C. H. Reilly, Professor S. D. Adshead, Rowland Plumb.
- RATCLIFF: FRED [S., 1910], Melrose Villa, Bamford, Derbyshire.
Proposers: Wm. C. Fenton, Charles M. Hadfield, W. J. Hale.
- ROBERTS: EVAN WENDELL [S., 1914, *Special War Exam.*], Railway Inn, Penclawdd, Swansea.
Proposers: E. A. Rickards, H. V. Lanchester, C. H. B. Quennell.
- ROWNTREE: COLIN [S., 1911], 11 Hammersmith Terr., W.
Proposers: Charles Spooner, Professor S. D. Adshead, Fred. Rowntree.
- SAMUELS: EDWARD PERCY PROCTOR [S., 1907], Edenfield, Llanfairfechan, N. Wales.
Proposers: Herbert L. North, Richard Hall, Jos. Owen.
- SAXON: FREDERICK CHARLES [S., 1913], 17 St. Alban's Street, Rochdale.
Proposers: Francis Jones, Percy S. Worthington, Isaac Taylor.
- SHOOSMITH: ARTHUR GORDON [S., 1908], "Saima," Branksome Park, Bournemouth.
Proposers: C. Steward Smith, Ernest Newton, A.R.A., Reginald Blomfield, R.A.
- SOISSONS: LOUIS EMANUEL JEAN GUY DE SAVOIE CARIGNAN DE [S., 1913], 25 Cheyne Row, S.W.
Proposers: Leonard Stokes, Reginald Blomfield, R.A., Herbert Baker.
- STEVENSON: RAYMOND CROISDALE [S., 1918, *Special War Exam.*], 3 Grove Mansions, Stamford Hill, N.16.
Proposers: W. A. Forsyth, Walter Cave, Arthur Keen.
- THOMSON: JOHN STEWART [S., 1914], 12 Salisbury Road, Wimbledon.
Proposers: Thos. W. Aldwinckle, A. Jessop Hardwick, R. Allsebrook Hinds.
- TOMLINSON: LAWRENCE DIGBY [S., 1913], "Harley House," Harley Street, Leigh-on-Sea, Essex.
Proposers: T. Edwin Cooper, Sydney D. Kitson, John W. Simpson.
- TUBBS: GRAHAME BURNELL [S., 1917], 2 Moore Street, Cadogan Square, S.W.3.
Proposers: Percy B. Tubbs, Robert Atkinson, H. V. Lanchester.
- VERNON: GEORGE [Special], 22 Conduit Street, W.1., and "The Knoll," West End Avenue, Pinner, Middlesex.
Proposers: Philip Tree, Horace Field, Arthur Ashbridge.
- WALLACE: ROBERT STUART [S., 1913], 18 Marlborough Place, N.W.8.
Proposers: Robert Atkinson, Charles E. Varndell, James S. Gibson.
- WHITEHEAD: PERCY [S., 1912], Court Street, Uppermill, near Oldham.
Proposers: Wm. Lister Newcombe and the Council.
- WILLSON: ERNEST [S., 1911], 62 Alexandra Road, Blackburn.
Proposers: Edward M. Gibbs, W. H. Watkins, A. F. Watson.

Opening Meeting of the Session, 4th Nov. 1918.

THE FIRST GENERAL MEETING (ORDINARY) of the Session will be held Monday, 4th November 1918, at 5 p.m. for the following purposes:—
 To read the Minutes of the General Meeting (Ordinary) held Monday, 24th June; to announce the names of candidates for membership; formally to admit members attending for the first time since their election.

The PRESIDENT (Mr. HENRY T. HARE) to deliver THE OPENING ADDRESS OF THE SESSION.

General Meeting, 18th November, at 5 p.m.

A CHEPSTOW HOUSING SCHEME.

Paper by WILLIAM DUNN [F.].

Dates of Sessional Meetings, 1918-19.

- 1.—November 4: General Meeting (Ordinary).
- 2.—November 18: General Meeting (Ordinary).
- 3.—December 2: General Meeting (Business).
- 4.—December 16: General Meeting (Ordinary).
- 5.—January 6, 1919: General Meeting (Business).
- 6.—January 20: General Meeting (Ordinary).
- 7.—February 3: General Meeting (Ordinary).
- 8.—February 17: General Meeting (Ordinary).
- 9.—March 3: General Meeting (Business).
- 10.—March 17: General Meeting (Ordinary).
- 11.—March 31: General Meeting (Ordinary).
- 12.—April 14: General Meeting (Ordinary).
- 13.—May 5: Annual General Meeting.
- 14.—May 19: General Meeting (Ordinary).
- 15.—June 2: General Meeting (Business).
- 16.—June 23: General Meeting (Ordinary).

The subjects to be discussed will be duly announced.

